

REMARKS

Claims 18-37 remain in this application. Claims 1-17 have been canceled.

Claims 18-37 have been rejected under 35 USC 112, second paragraph, as indefinite. The examiner finds that no filter structure is recited in the body of the claim. Reconsideration of the rejection is requested.

Actually, claim 18 does recite filter structure and one of ordinary skill in the art would so recognize that fact. Claim 18 calls for “a means for separating water from the fuel.” The structure for accomplishing the recited function is known in the prior art and is described in the specification at pages 1 and 2 in the discussion of U.S. Patent 4,264,442. The means for separating water from the fuel is described in the specification and in U.S. Patent 4,264,442 (see Fig. 2 thereof reproduced in the Exhibit appended hereto).

The fuel filter in U.S. Patent 4,264,442 has a chamber in which there is a cage 50. The cage 50 defines a fuel inlet chamber 30, which communicates with the fuel inlet 26, and a fuel outlet chamber 32, which is located diametrically opposite the fuel inlet chamber and is separated from it by a partition or “imperforate wall,” and which communicates with the fuel outlet 28. The fuel entering the fuel filter via the fuel inlet passes through the fuel inlet chamber, emerges from it via a porous wall 52 into the chamber, circles the cage, then on the opposite side of the cage, via an equally porous wall, it enters the fuel outlet chamber, and from there, via the fuel outlet, it flows out of the fuel filter, as cleaned fuel. The bottom of the chamber outside the cage acts as a sump 24 for water that has been separated out in the filtration. On the bottom of the sump there is a valve 82, which is controlled with the aid of a water level sensor 64 located in the sump and with which a water outlet 80, communicating with a line 84, can be selectively opened and closed. If via the sensor it is ascertained that a certain quantity of water has accumulated in the sump, then the valve is opened, via a negative pressure generated at the water outlet, and a substantial portion of the water is exhausted from the sump by suction and carried away to a downstream chamber via the line.

As disclosed by applicants’ specification at paragraph 5, a substantial disadvantage in carrying water out into such a chamber outside the fuel filter is that the chamber for catching the water must be emptied manually, and in this respect the fuel filter disclosed in U.S. Patent 4,264,442 is not maintenance-free. Applicant’s invention is concerned, inter alia, with solving this problem. Thus, claim 18 requires “means, mounted onto the fuel filter downstream of the water outlet, for separating contaminants from the water to be drained off from the sump, for example, a water absorption and evaporation unit, open to the

environment, and containing an absorbent material or an activated charcoal filter”.

Claims 18-20, 31, 32, 36 and 37 have been rejected under 35 U.S.C. 102(b) as anticipated by JP 61-234909 (JP’909). Reconsideration of the rejection is requested.

JP’909 simply discloses a fuel filter comprising a fuel inlet (2), a fuel outlet (3), a means for separating water from the fuel, a sump (6) for collecting the water separated from the fuel, a water outlet (9) associated with the sump, and control means (24) for a valve (22) located at the water outlet (9).

JP’909 fails to teach or suggest any means, mounted onto the fuel filter downstream of the water outlet (9), for separating contaminants from the water drained off from the sump (6). Thus, JP’909 does not anticipate any of claims 18-20, 31, 32, 36 and 37.

Claims 21-23 have been rejected under 35 U.S.C. 103(a) as unpatentable over JP’909 in view of Tiemeyer (US 5,366,520). Reconsideration of the rejection is requested.

Tiemeyer’s disclosed invention relates to the processing of hazardous wastes generated by petroleum refining and/or production, and more particularly to an apparatus and method for processing hazardous waste to be used as fuel in industrial furnaces and boilers. It teaches a filtration process utilizing a modified dry-chemical or cement tanker truck to dewater wastes and transport them directly to a permitted industrial furnace and/or industrial boiler in solid form. Refinery hazardous wastes are pumped from the generator's storage tanks directly into the top of the modified tanker truck at a predetermined pressure, temperature, and flow rate. The tanker truck has previously been filled with an inexpensive, light-weight, high BTU-content hydrophobic filtration media and a small amount of granular activated carbon (GAC). The waste is filtered through the hydrophobic filtration media

which absorbs the oil and traps the solids. Particle sizes of the hydrophobic media are distributed such that solids plugging does not occur until the media is saturated with oil. The water constituent of the waste passes through the hydrophobic media without absorption, then through the granular activated carbon where trace amounts of organic material are removed, and is finally discharged out the bottom of the tanker truck and into the generators' permitted waste water treatment plant. The process continues until the hydrophobic media becomes saturated with oil. The oil-saturated media and solids are then transported directly to a permitted industrial furnace and burned as a high BTU fuel source.

The examiner cites Tiemeyer for a teaching of an activated carbon filter. However, Tiemeyer does not solve the basic deficiency in JP'909 in that neither reference teaches or suggests any means, mounted onto a fuel filter downstream of the water outlet of the fuel filter, for separating contaminants from the water drained off from the sump. Thus, even if it were obvious to combine the teachings of JP'909 with the teachings of Tiemeyer, one of ordinary skill in the art would not have arrived at the subject matter of applicant's claim 18. Thus, claims 21-23 are not rendered obvious by the combined teaching of Tiemeyer and JP'909.

Claims 24-30 have been rejected under 35 U.C.S. 103(a) as unpatentable over JP'909 in view of Harenbrock (US 2003/0121860), claims 24 and 25 have been rejected under 35 U.C.S. 103(a) as unpatentable over JP'909 in view of Hall (US 4,334,989), claims 26-30 have been rejected under 35 U.C.S. 103(a) as unpatentable over JP'909 in view of Hall and Maxwell (US 6,444,121), claims 34 and 35 have been rejected under 35 U.C.S. 103(a) as unpatentable over JP'909 in view of Tarr (US 5,534,161), and claim 33 has been rejected

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under 35 U.C.S. 103(a) as unpatentable over JP'909 in view of Gough (US 3,868,321) or McVay (US 3,508,658) or Muller (US 3,685,655).

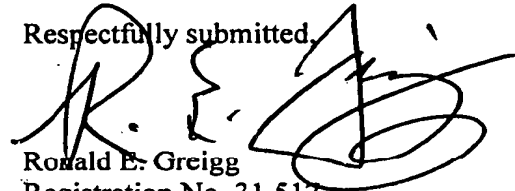
It is noted that claim 18 has not been rejected as unpatentable over the teachings of JP'909 in view of any of the teachings in Harenbrock, Hall, Maxwell, Tarr, Gough, McVay or Muller. In fact, none of Harenbrock, Hall, Maxwell, Tarr, Gough, McVay and Muller solves the basic deficiency in JP'909 in that none of the references teaches or suggests any means, mounted onto a fuel filter downstream of the water outlet of the fuel filter, for separating contaminants from the water drained off from the sump. Thus, even if it were obvious to combine the teachings of JP'909 with the teachings of Harenbrock, Hall, Maxwell, Tarr, Gough, McVay and Muller, one of ordinary skill in the art would not have arrived at the subject matter of applicant's claim 18. Since claim 18 is allowable over the teachings of JP'909 in combination with Harenbrock, Hall, Maxwell, Tarr, Gough, McVay and Muller, it follows that claims 24-35 are likewise patentable. See, MPEP 2143.03.

The Commissioner is authorized to charge payment of any/all fees associated with this communication to Deposit Account Number 07-2100.

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Entry of the amendment and allowance of the claims are respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'R. E. Greigg', written over a circular stamp or seal.

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EXHIBIT

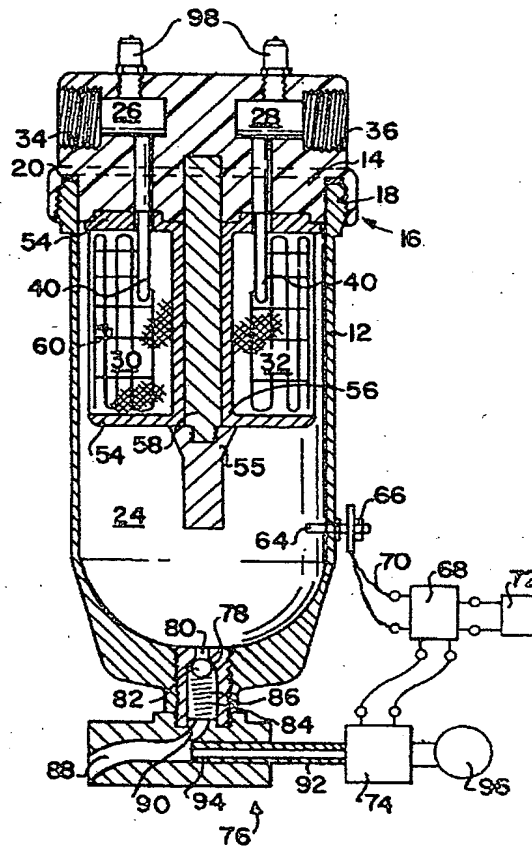


FIG. 2